

a supply of flammable fluid located within said smoke producing chamber to be vaporized when heated;

a heating element located within said smoke producing chamber above said supply of fluid;

a gas inlet communicating with said closed smoke producing chamber to receive non-combustible nitrogen gas under pressure, said gas inlet having an inlet orifice in fluid communication with said supply of fluid so that when said non-combustible nitrogen gas under pressure is delivered through said gas inlet, some of said supply of flammable fluid is drawn into said gas inlet via said inlet orifice, whereby a mixture of said non-combustible nitrogen gas and flammable fluid is blown through said gas inlet and against said heating element to be vaporized into smoke when said heating element is heated, said non-combustible nitrogen gas preventing dieseling within said closed chamber and the possibility of an explosion at the volatile, potentially explosive environment in which the smoke will be used;

a smoke outlet communicating with said closed smoke producing chamber to permit said smoke to exit said smoke producing chamber to the volatile, potentially explosive environment; and

a source of non-combustible nitrogen gas connected to said gas inlet to supply said non-combustible nitrogen gas under pressure to said closed chamber.

19. (Twice Amended) A method for generating smoke for use at a volatile, potentially explosive environment, comprising the steps of:

locating a supply of flammable fluid within a closed smoke producing chamber, said closed smoke producing chamber having a gas inlet to receive a supply of non-combustible

nitrogen gas under pressure and a smoke outlet to permit smoke to exit said closed smoke producing chamber;

locating a heating element within said closed smoke producing chamber so as to extend in spaced alignment with said supply of fluid;

supplying said non-combustible nitrogen gas under pressure to said closed smoke producing chamber via said gas inlet for blowing a mixture of said non-combustible nitrogen gas and said supply of flammable fluid against said heating element;

energizing said heating element for vaporizing into smoke said mixture of non-combustible nitrogen gas and said flammable fluid that is blown against said heating element, said non-combustible nitrogen gas preventing dieseling within said closed chamber and the possibility of an explosion at the volatile, potentially explosive environment at which the smoke will be used; and

removing said smoke from said smoke producing chamber to the volatile potentially explosive environment via said smoke outlet.

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